READERS' CORNER

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We can only answer questions or remarks of general interest to our readers, concerning projects not older than two years and published in *Elektor Electronics*. In view of the amount of post and email received, it is not possible to answer all correspondence, and we are unable to respond to individual wishes and requests for modifications to, or additional information about, *Elektor Electronics* projects.

Stepper Motors

Dear Sir — I am not much up on electronics , I can just read some circuits, yet when I tried to build a project in your magazine it really worked and I was rather pleased. Some mags are above my head and expect you to know what they are talking about and fill in the gaps yourself. Now there is another project I will have a go at, DC-Operated Stepper Motors (October 2003, Ed.). I have a small ccd camera on my fish pond and rigged up some motors, belts and gears to pan and tilt, and looks the size of a beach bucket.

Now the parts , as you say , I can get from the ads in your mag, but the stepper motors are a bit hard to find, I might be looking in the wrong place, I spent nearly all day, Sunday, looking for stepper motors and found a lot, but the price they ask, it would be cheaper to buy new floppy drives and strip out the motor. It would have been nice if you had included, as you do for most, a www address or possible supplier like Bull Electronics who now has no motors, so could someone point me in the right direction? While on the net I found a few demos of circuit design and simulation, two I paid for before I found the demos, but found they were above my head. Not only that, the components they use were obsolete, as well as impossible to find in Maplin's catalogue. I like Electronics, Mechanics and computing principles, but then, they don't let you know the value or component number and you can only change very few parts. Now I would like a programme that I could put in your circuit and test it out, I know you test all circuits that you print, but I would like to play and change things to see what happens. A toy is nice, but more fun if it comes apart and back together and I think I would learn more if I knew what effect they have on a circuit . I probably could not afford what you use, but maybe you might know of something that would do for me. I like your magazine because the circuits you show are very clear and even I with little knowledge of components can understand them, well, not all of them yet, but I will.

Peter (by email)

Virtually all the stepper motors used in conjunction with our published projects have been obtained from scrapped floppy disks drives and old matrix printers, picked up from car boot sales, radio amateur rallies and computer flea markets.

We rarely state suppliers' addresses because mentioning one supplier is reason for a dozen others to complain they are not listed. In the case of stepper motors, we are simply not aware of suppliers of new motors as they will be very expensive and difficult to obtain as one-offs.

The November 2003 issue contains the first part of an in-depth article on Stepper Motors so you have something to look forward to.

Simple Infrared Light Barrier

Dear Sir — I don't know if I will be able to explain it properly, but I will try to tell you what kind of tests I have done on the Simple Infrared Light Barrier (July/August 2002, Ed.). I built the transmission circuit, stage by stage, and I proved that it worked properly, sending the correct modulated signal to the reception circuit. I also built the reception circuit, and I could see that it did not work, because the output was always at 0 V level. I thought that it might be a construction problem, so I built it twice again, but the results were the same. I analysed the schematic circuit, as well as the specification of the IR receiver and the TLC555C, and I saw that the TLC555 couldn't work because with only R3 between pins 2 and 6 and ground, the voltage on THRESHOLD and TRIGGER prevents oscillation (also because pin 7 –DISCHARGE- is needed for discharging the capacitor that the circuit should have).

I saw that the only way it could work was making a reset periodically to make the output oscillate, but the receiver must receive an oscillating signal to reset the circuit (I mean that the reception circuit can only oscillate when it receives an oscillating IR signal, so the tweeter produces sound when the beam is not interrupted (this is, always) because when the SFH5110 does not receive any signal, its output is at 5 V, so diode D1 does not discharge capacitor C2 and pin 4 of the 555 (RESET) stays at 5 V level.

Because of ther above I think the circuit doesn't work as described (of course it may be a failure of the Spanish publication) and I write to you to ask if I could see a picture of the correct circuit, so the alarm sounds when the beam is interrupted. Thank you very much for your help.

Manuel Requena,
Investigation engineer,
CITEF

Wow, what a story! The answer is simple: the receiving IC TLC555 is not required to oscillate. You seem to have overlooked that a DC (or 'active') piezo buzzer should be used (see + and – symbols on Bz1).

Projects cases

Hi there — this may be a stupid question, but where do you get your project-cases manufactured, and how do you go about getting them made? Every featured project has its' own case, specially designed to fit... I'm trying to find how to get such a case made, how much it costs, what the process is etc., and even Google (yes, it's true!) is coming up with no useful links :-(. Perhaps a by-story in a future issue? Or you could just tell me / print it on the letters page <grin>

Simon (by email)

We do not get our project cases manufactured as you write. The cases used for our projects are off the shelf types manufactured by companies like OKW, Bopla, Retex, Pactec, Hammond, etc. selected from their catalogues. Where applicable the type numbers and case manufacturer name are given in the parts list published with the project.

CORRECTIONS & UPDATES

Valve Preamplifier (1)

September 2003, p. 25, 020383-1

In the Components List for the Power Supply board, the lead pitch of capacitor C13 should be amended to read: 15 mm.

Real RS232 for Laptop PCs

December 2002, p. 66, 014099-1

Please note that C4 is shown with the wrong polarity in the circuit diagram. On the printed circuit board overlay, the same goes for C1, C2 , C3 and the supply connections.

DDS RF Signal Generator

October 2003, p. 14, 020299-1

In some cases, the display reading does not change when the rotary encoder is turned quickly. The problem is solved by connecting a 10-nF capacitor between pin 13 of the microcontroller and ground.